

OLT Series

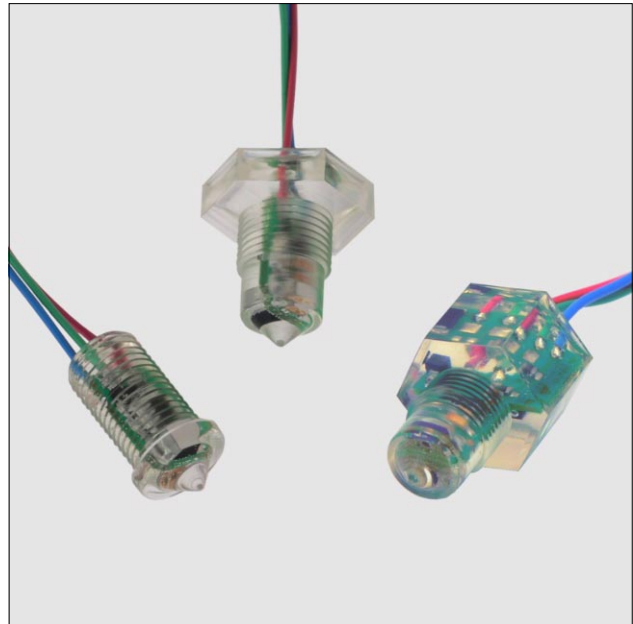
Trogamid optical liquid level switches

FEATURES

- Solid state technology, no moving parts
- Miniature size, easy to install
- TTL compatible or transistor output versions
- 10, 250 or 500 mA output current
- Trogamid housings
- High media compatibility
- Fast response, electrically robust

WETTED MATERIALS

Tip and housing: Trogamid



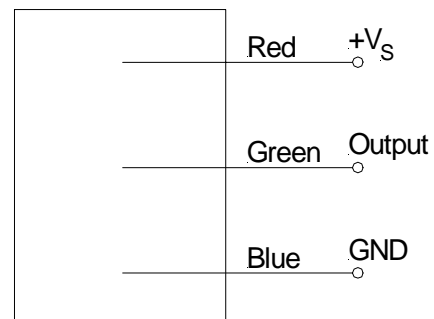
SPECIFICATIONS

Maximum ratings

Supply voltage	
OLT01...	5...12 V
OLT25X...	5...16 V
OLT25U...	10...28 V
OLT50...	10...40 V
Supply current	
OLT01..., OLT25...	15 mA
OLT50...	25 mA
Output current	
OLT01...*	10 mA
OLT25...	250 mA
OLT50...	500 mA
Operating temperature range	
OLT01..., OLT50...	-25...80°C
OLT25...	-40...125°C
Pressure range	
OLT...F	20 bar
all others	7 bar
Dielectric strength	4 kV
Protection class	IP 67

ELECTRICAL CONNECTION

3 wire version



4 wire version



* 10 mA sink current, source current depends on V_S and R_L

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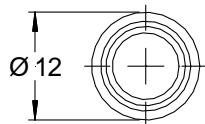
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PERFORMANCE CHARACTERISTICS

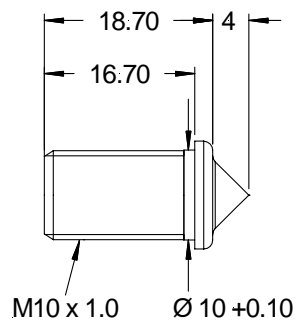
Characteristics	Min.	Typ.	Max.	Unit
Repeatability			±1	mm
Hysteresis (depending on liquid)			1	
Response time rising liquid			50	µs
Response time falling liquid (ethanol)			1	s

OUTLINE DRAWING

M10 thread (Housing type OLT...F...)

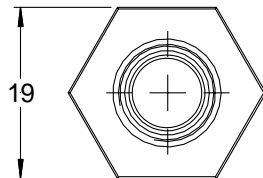


mass: 5 g

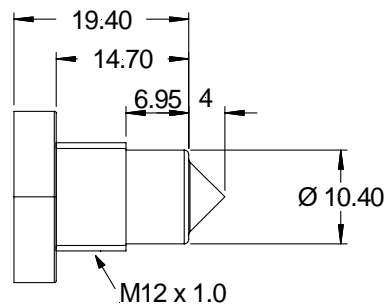


dimensions in mm

M12 thread short (Housing type OLT...K...)

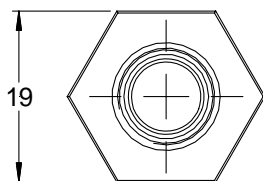


mass: 6 g

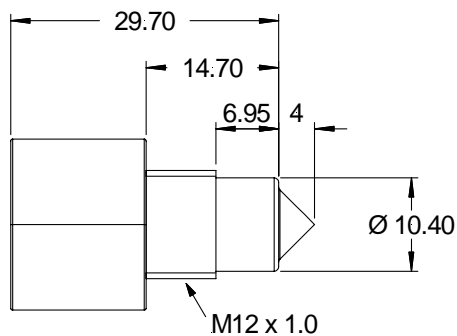


dimensions in mm

M12 thread long (Housing type OLT...L...)



mass: 10 g



dimensions in mm

Note: Do not mount the sensor with prism pointing downwards.
The prism should be at least 10 mm away from any infrared-reflecting surface.

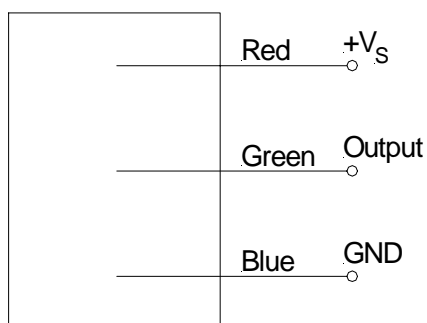
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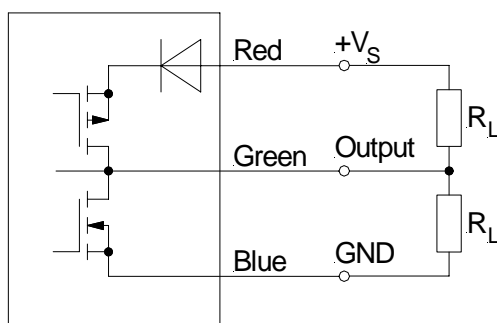
ELECTRICAL CONNECTION (cont.)

3 wire versions

TTL compatible*

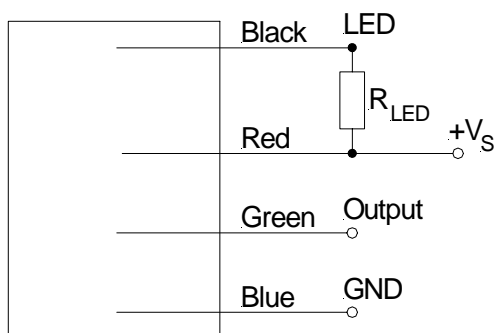


Push-Pull (current sinking and sourcing)*



4 wire versions

TTL compatible*



* Note:

When low, the sensor output gives approx. 0 V.
When high, the sensor output provides the supply voltage minus approx. 0.5 V.

Note: The nominal LED current (I_{LED}) is 10 mA and may be adjusted by ± 3 mA in order to handle specific applications. I_{LED} is adjusted by connecting the LED anode (black wire) to the sensor's supply voltage (V_S) via a current limiting resistor (R_{LED}). I_{LED} is dependent on the supply voltage used. R_{LED} is calculated as follows:

$$R_{LED} = \frac{(V_S - 1.3V)}{I_{LED}}$$

Failure to select the correct resistor value can lead to the sensor not operating or being damaged.

Note: All OLT... devices are supplied with lead wires. The wire lengths are 200 mm -0, +30 mm measured from the back of the housing. Wire diameters are 0.511 mm (AWG 24) for all OLT01... devices and 0.812 mm (AWG 20) for all OLT25/50... devices.

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ORDERING INFORMATION

TTL compatible output devices

Options	Series	01T	Output			Housing type	Termination	
			Current	Type	Function			
	OLT		10 mA	TTL compatible	0 Low in air	F M10 thread	3	3 wire
					1 High in air	K M12 thread short	4	4 wire*
								* on request, MOQ may apply
Example: OLT 01T 0 F 3								

Transistor output devices

Options	Series		Output			Housing type	Termination	
			Current	Type	Function			
	OLT	25X	250 mA	Push-Pull (V _s = 5...16 V)	0 Low in air	L M12 thread long	3	3 wire
		25U	250 mA	Push-Pull (V _s = 10...28 V)	1 High in air			
		50U	500 mA	Push-Pull				
Example: OLT 50U 0 L 3								

Accessories (please order separately using the following order numbers)

Order No.	Description	Use with
F I X I N G N U T S		
ZA000910	M12 x 1, nickel plated brass	OLT...K..., OLT...L...
ZA000911	M12 x 1, stainless steel (303, clear passivated)	
ZA000912	M10 x 1, plastic	OLT...F...
W A S H E R S		
ZA000913	M12 x 1, VAMAC	OLT25...L... (high temperature devices)
ZA000914	M12 x 1, nitrile	OLT01...K..., OLT50...L... (standard temperature devices)
ZA000915	9.5 x 1, silicone O-ring, shore ~60	OLT01...F...

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